What Is Claimed Is:

1. A storage system, connectable via a communication channel to one or more host devices, comprising an external storage device having one or more physical devices to store data for input from and output to said host devices and a storage control device which controls transfer of said data between said host devices and said external storage device, wherein:

said storage control device has cache memory which temporarily holds one or more blocks of said data, control information memory which stores control information, and a control portion which is connected to said host devices, said external storage device, said cache memory, and said control information memory, defines each of one or more sets of blocks of said data stored in said external storage device as one or more logical devices, and controls the input and output of said blocks to and from said external storage device, said cache memory, and said host devices;

said control portion has one or more processors which receive sort processing execution instructions from said host devices and perform sort processing;

said one or more processors are notified, by means of said sort processing execution instructions, of sort-in information specifying an arbitrary block group within an arbitrary logical device as a sort-in block group, key information specifying data at an arbitrary position in said blocks as a sort key, sort-work information specifying an arbitrary block group in an arbitrary logical device as a sort-work block group, and sort-out information specifying an arbitrary block group in an arbitrary logical device as a sort-out block group; and,

said one or more processors, when executing said sort processing in response to said sort processing execution

instructions, write said specified sort-in block group in said external storage device to said cache memory, and while using said specified sort-work block group as a work area, sort said sort-in block group written to said cache memory based on said specified sort key value, store said sorted sort-in block group to said specified sort-out block group, and notify said host devices of the completion of said sort processing.

2. The storage system according to Claim 1, further comprising management equipment, connected to said control portion, capable of the visual display of input/output information of said control information memory, and wherein said one or more processors are constructed so as to be able to receive said sort processing execution instructions from said management equipment as well as from said host devices, and to perform said sort processing.

3. The storage system according to Claim 1, wherein:

said sort-in information comprises a sort-in address which indicates the address of the logical device in which said sort-in block group exists, and a sort range which indicates the location range in which said sort-in block group exists in said logical device identified by said sort-in address;

said sort-work information comprises a sort-work address which indicates the address of the logical device in which said sort-work block group exists, and a sort-work range which indicates the location range in which said sort-work block group exists in said logical device identified by said sort-work address; and,

said sort-out information comprises a sort-out address which indicates the address of the logical device in which said sort-out block group exists, and a sort-out range which

indicates the location range in which said sort-out block group exists in said logical device identified by said sort-out address.

4. The storage system according to Claim 1, wherein, when said sort-work information transmitted by said sort processing execution instruction has an invalid value, said one or more processors secure in said cache memory a substitute storage area for the sort-work block group specified by said sort-work information, and use said substitute storage area in said cache memory as said work area.

5. The storage system according to Claim 1, further comprising management equipment which is connected to said control portion can visually display input and output information of said control information memory, and wherein:

said management equipment can output, to said control portion, a reservation instruction specifying an arbitrary logical device or an arbitrary block group in an arbitrary logical device as a reserved area to be secured in advance for use as said work area; and,

said one or more processors of said control portion, in response to said reservation instruction from said management equipment, stores access prohibition information for said reserved area specified by said reservation instruction in said control information memory, and based on said access prohibition information in said control information memory, limits data input/output of said reserved area by host devices, and, on receiving a plurality of said sort processing execution instructions specifying said overlapping sort-work block groups, uses said reserved area as a substitute for any of said overlapping sort-work

block groups, and by this means simultaneously executes said plurality of sort processing execution instructions.

6. The storage system according to Claim 5, wherein:

said one or more processors monitor the usage states of said one or more physical devices in said external storage device through data input and output and store physical device usage information indicating usage load amounts of said one or more physical devices in said control information memory; and, when a plurality of said reserved areas are already secured and an area is to be selected from among said plurality of reserved areas for use as said substitute, said one or more processors select a logical device existing in a physical device for which said usage load amount is relatively low from among said plurality of reserved areas, based on said physical device usage information stored in said control information memory.

7. The storage system according to Claim 1, wherein:

each of the blocks in said logical devices has a unique ID;

in sort processing of said sort-in block group in said external storage device, said one or more processors write sorted blocks of said sort-in block group to said sort-work block group or said sort-out block group, without changing the IDs thereof;

during execution or after completion of sort processing of said sort-in block group, when data of any of the blocks within said sort-in block group in said external storage device is updated during online service by said host devices, said one or more processors execute online sort processing of said blocks to be updated, during said online service; and,

in said online sort processing, said one or more processors write said blocks to be updated to positions after sorting in said sort-work block group or said sort-out block group, and based on said IDs of said blocks to be updated, retrieve and erase blocks remaining in positions before sorting of said updated blocks, from said sort-work block group or said sort-out block group.

8. The storage system according to Claim 1, wherein:

when sort processing of said sort-in block group in said external storage device is performed, said one or more processors record in said control information memory block position correspondence information indicating, in association, the position in said storage system of each block in said sort-in block group, and the position in said storage system of each block in said sort-work block group or said sort-out block group corresponding to each block in said sort-in block group;

during execution or after completion of sort processing of said sort-in block group, when the data of any of the blocks within said sort-in block group in said external storage device is updated during online service of said host devices, said one or more processors execute online sort processing of said blocks to be updated, during said online service; and,

in said online sort processing, said one or more processors write said blocks to be updated to the positions after sorting in said sort-work block group or in said sort-out block group and, based on said block position correspondence information, retrieve and erase blocks remaining in positions prior to sorting of said updated blocks from within said sort-work block group or said sort-out block group, and update said block position correspondence information so as to correct the positions of

said blocks to be updated within said sort-work block group or said sort-out block group from said position prior to sorting to said position after sorting.

9. The storage system according to Claim 1, wherein:

said one or more processors create a copy of an arbitrary logical device, and when a block in the original logical device is updated during online service of said host devices after creation of said copy, perform processing to reflect the update of said block within said original logical device in the block in said copy during said online service; and,

said one or more processors regard the block group in said copy as said sort-in block group, and thereafter, when an update of said blocks in said original logical device is reflected in the blocks in said copy during said online service, execute sort processing of said blocks reflecting said update in said copy during said online service.

10. A storage system, connectable via a communication channel to one or more host devices, comprising an external storage device which stores data for input from and output to said host devices, and a storage control device which controls transfer of said data between said host devices and said external storage device, wherein:

said storage control device has shared memory which can be used for different prescribed purposes and a control portion which is connected to said host devices, said external storage device, and said shared memory, and controls data input to and output from said external storage device, said host devices, and said shared memory;

said control portion has one or more processors which receive sort processing execution instructions from said host devices and perform sort processing; and,

said one or more processors perform sort processing in which a first storage area in said external storage device is selected as a sort-in area, a second storage area in said external storage device or said shared memory is selected as a sort-work area, a third storage area in said external storage device is selected as a sort-out area, the data of said sort-in area is sorted using said sort-work area, and the sorted data is stored in said sort-out area.